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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,195	05/04/2006	Thomas Tiller	5837	6739

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EXAMINER

MARTIN, LAURA E

ART UNIT	PAPER NUMBER
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2853

MAIL DATE	DELIVERY MODE
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08/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/578,195

Applicant(s)

TILLER ET AL.

Examiner

Laura E. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/4/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

Acknowledgement is made of the information disclosure statement (IDS) submitted 4 May 2006. The submission is in compliance with the provisions of 37 CFR 1.97.

Priority

Acknowledgement is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed on 4 May 2007.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-20, 34, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Houle (US 6513921 B).

Houle discloses the following claim limitations:

As per claim 17: a method of use of at least one hydrocarbon compound having a carbon chain of two to six carbon atoms carrying two or three hydroxyl groups in an inkjet printing ink composition as a non-particulate matting compound (example 1,

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column 22, lines 15-30), said method comprising the step of incorporating a sufficient amount of said matting compound into said printing ink composition such that the gloss of a marking printed with said printing ink composition is adapted to the gloss of a substrate carrying said marking so that said marking is not discernible by an unaided eye (column 12, line 60-column 13, line 10).

As per claim 18: said matting compound is incorporated into said composition in an amount ranging from 0.5 to 10 weight-% of the overall composition (example 1, column 22, lines 15-30).

As per claim 19: said matting compound is incorporated into said composition in an amount ranging from 1.0 to 8.0 weight-% of the overall composition (example 1, column 22, lines 15-30).

As per claim 20: said matting compound is selected from the group consisting of 1,5-pentane diol, ethylenediol, butanediol, propanediol, glycerol and mixtures thereof (example 1, column 22, lines 15-30).

As per claim 34: a substrate carrying a printed security marking printed with an inkjet printing ink composition comprising a non-particulate matting compound with at least one hydrocarbon compound having a linear or branched carbon chain of two to six carbon atoms carrying two or three hydroxyl groups (example 1, column 22, lines 15-30), wherein the gloss of said security marking is adapted to the gloss of said substrate by incorporating a sufficient amount of said matting compound into said printing ink composition such that said marking is not discernible by an unaided eye (column 12, line 60-column 13, line 10).

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As per claim 35: a method of applying an invisible security marking to a substrate, comprising the steps of: providing an inkjet printing ink comprising a sufficient amount of at least one non-particulate matting compound; and printing with said ink a security marking on a substrate, wherein the gloss of the printed security marking is adapted to the gloss of said substrate so that said marking is not discernible by an unaided eye (column 12, line 60-column 13, line 10), wherein said at least one non-particulate matting compound is a hydrocarbon compound having a linear or branched carbon chain of two to six carbon atoms carrying two or three hydroxyl groups (example 1, column 22, lines 15-30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houle (US 6513921 B) in view of Siddiqui (US 5939468).

Houle discloses the following claim limitations:

As per claim 21: an ink comprising at least one solvent, at least one marking compound absorbing light outside the visible wavelength range, and optionally additives (example 1, column 22, lines 15-30).

As per claim 25: the amount of solvent ranges from 70% and 90% weight of the overall ink composition (example 1, column 22, lines 16-30 – water is a solvent).

As per claim 28: at least one conductivity salt, humectant, and/or a stabilizer (column 7, lines 33-62).

As per claim 32: the marking compound is incorporated in said composition in an amount ranging from 0.0001 to 10 weight% of the overall ink composition (example 1, column 22, lines 15-30).

As per claim 36: inkjet printing ink composition comprising at least one solvent, and at least one marking compound, said marking compound absorbing light of a non-visible wavelength, and optionally additives (example 1, column 22, lines 15-30), wherein said ink further comprises a sufficient amount of a non-particulate matting compound selected from the group of hydrocarbon compounds having a linear or branched carbon chain of two to six carbon atoms carrying two or three hydroxyl groups, such that the gloss of a marking printed with said printing ink composition is adapted to the gloss of a substrate carrying said marking so that said marking is not discernible by an unaided eye (column 12, line 60-column 13, line 10).

Houle does not disclose the following claim limitations:

As per claims 21 and 36: at least one binder.

As per claim 22: the solvent is selected from the group consisting of ketones, acetate esters, alcohols, and mixtures thereof.

As per claim 23: said solvent is selected from the group consisting of acetone, methyl ethyl ketone, ethyl acetate, methyl acetate, methanol, isopropanol, isopropyl acetate, ethanol, propanol and mixtures thereof.

As per claim 24: the amount of said solvent ranges from 40 to 95 weight-% of the overall ink composition.

As per claim 26: said binder comprises a resin selected from the group consisting of vinylic-, cellulosic-, acrylic-, polyacetalic-, styrene-maleic copolymer resins and mixtures thereof.

As per claim 27: said binder is incorporated in said composition in an amount ranging from 3 to 30 weight-%, preferably from 4 and 20 weight-% of the overall ink composition.

As per claim 29: said conductivity salt is selected from the group consisting of lithium nitrate, alkyl ammonium acetate, potassium acetate and mixtures thereof.

As per claim 30: said conductivity salt is included in said composition in an amount ranging from 0.3 to 5 weight-% of the overall ink composition.

As per claim 31: said conductivity salt is included in said composition in an amount ranging between 0.5 and 3 weight-% of the overall ink composition.

As per claim 33: said marking compound is incorporated in said composition in an amount ranging from 0.01 to 2 weight-% of the overall ink composition.

Siddiqui discloses the following claim limitations:

As per claims 21 and 36: at least one binder (example 1, column 12, line 55-column 13, line 16).

As per claim 22: the solvent is selected from the group consisting of ketones, acetate esters, alcohols, and mixtures thereof (column 7, lines 32-56).

As per claim 23: said solvent is selected from the group consisting of acetone, methyl ethyl ketone, ethyl acetate, methyl acetate, methanol, isopropanol, isopropyl acetate, ethanol, propanol and mixtures thereof (column 7, lines 32-56).

As per claim 24: the amount of said solvent ranges from 40 to 95 weight-% of the overall ink composition (example 1, column 12, line 55-column 13, line 16).

As per claim 26: said binder comprises a resin selected from the group consisting of vinylic-, cellulosic-, acrylic-, polyacetalic-, styrene-maleic copolymer resins and mixtures thereof (example 1, column 12, line 55-column 13, line 16).

As per claim 27: said binder is incorporated in said composition in an amount ranging from 3 to 30 weight-%, preferably from 4 and 20 weight-% of the overall ink composition (example 1, column 12, line 55-column 13, line 16).

As per claim 29: said conductivity salt is selected from the group consisting of lithium nitrate, alkyl ammonium acetate, potassium acetate and mixtures thereof (example 1, column 12, line 55-column 13, line 16).

As per claim 30: said conductivity salt is included in said composition in an amount ranging from 0.3 to 5 weight-% of the overall ink composition (example 1, column 12, line 55-column 13, line 16).

As per claim 31: said conductivity salt is included in said composition in an amount ranging between 0.5 and 3 weight-% of the overall ink composition (example 1, column 12, line 55-column 13, line 16).

As per claim 33: said marking compound is incorporated in said composition in an amount ranging from 0.01 to 2 weight-% of the overall ink composition (example 1, column 12, line 55-column 13, line 16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Houle with the disclosure of Siddiqui in order to reduce blushing under warm temperatures and to improve ink quality.

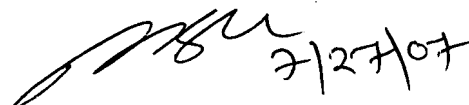
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin



MANISH S. SHAH
PRIMARY EXAMINER